

## Congressman Tom Campbell visits Ames

On April 9, Congressman Tom Campbell, of California's 15th District in San Jose, returned to Ames for a second "town hall" meeting with center personnel. As in his previous visit, he was charming and upbeat while discussing a wide range of topics with a little something for everyone.

Perhaps of greatest significance to Ames employees, Campbell, a graduate of the famous Chicago school of economics, reaffirmed his belief in the value of long-term Government investment, such as that undertaken by NASA, in areas that private enterprise simply will not take on. However, Campbell said, he is "not willing to issue a blank check in support of NASA Ames." He did acknowledge that he supports us, and favors the type of astrobiology research associated with this center. And he pledged to work with Ames' district representative, Congresswoman Anna Eshoo, to address any issues of concern that Ames may encounter in the future.

Campbell went on to warn that we should not be too impressed with the current "balanced budget." When you are borrowing \$99 billion from five different trust funds to achieve this 'balance,' he suggested, one should "be very careful about plans to spend the surplus." The main problem, he argued, is entitlements and debt

service. With entitlements consuming 55% and debt service 18% of the Federal budget, it doesn't leave much

upon by Congress, he said, and has "no termination date." Campbell expressed the belief that, despite America's best intentions, this country's foreign aid dollars could be spent far more wisely and compassionately "to eliminate hunger, to clean drinking water, to provide vitamins and to inoculate babies against childhood diseases."

Campbell did not hold back, weighing in on every topic he was asked to address. He offered his opinions on the collapse of the tobacco settlement (this nation was being asked to buy "a pig in a poke"), the problem of non-violent drug offenders clogging up our prisons (he proposes a controversial market-type solution), and the use of traditional investment patterns by banks, particularly in "poor" neighborhoods ("you can't legislate to

force a bank to take risks on investment"). He even expressed his view on the nascent space tourism industry — "if it pays the freight for science, why not," he wondered out loud!

Those present may have differed with the Congressman on specific issues, but they certainly couldn't say he held back or wasn't forthright.

Campbell told the live audience and those watching via Ames Vidnet that he would like "to come back in another six months and do this again." One thing is certain — it won't be dull or lack for want of lively debate!

BY DAVID MORSE



photos by Sue Bowling

Above: Congressman Tom Campbell (left), Peter Fiekowsky of Automated Visual Inspection (center), and Joe Jordan of Sterling Software



Above: Chris McKay of the Space Science division asks Congressman Campbell to investigate the issue of developing Internet access to remote and poor regions in Africa and elsewhere.

for research, he said. In fact, "it puts everything else under budget pressure."

Campbell warned that it is "a mistake to think that the Persian Gulf is behind us." Further, America's foreign policy in Bosnia has never been voted

## Ames Events/Activities

### Lunar Prospector lauded

Florida Governor Lawton Chiles and members of his Cabinet passed a resolution on Tuesday, April 14 recognizing Lunar Prospector, the first spacecraft to blast off from the state's launch pad at Cape Canaveral. According to a press release from the Governor's office, legislators were "proud" to acknowledge their support for this NASA mission and important first launch.

"Florida is intent on being a long-term player as space moves from federal projects into reliable, commercial transportation systems," said Florida state comptroller Bob Milligan. He went

on to point out that Lunar Prospector has already sent back evidence indicating the presence of water ice at the lunar poles, a finding he referred to as "key to future colonization." According to Florida state insurance commissioner Bill Nelson, "this gives us an added incentive to go back to the moon." Nelson flew aboard a Space Shuttle mission during his tenure in the U.S. Congress.

The Spaceport Florida Authority, the state's space agency, operates Launch Complex 46 in partnership with the Navy, Air Force and NASA. The facility is key to Florida's efforts to retain



its dominant position in the increasingly competitive space business. Other states, including Alaska, California, New Mexico and Virginia, are jockeying to become the site from which the next generation of spacecraft now under development will be launched.

### Ames Pollution Prevention Award

The Environmental Services Office, Code DQE, is accepting nominations for the Ames Pollution Prevention (P2) Award. The scope of the award includes projects that prevent pollution or otherwise reduce environmental impacts. Eligible nominations include activities that result in: 1) reduced hazardous waste; 2) reduced solid waste; 3) increased use of recycled products; 4) resource conservation through reuse/recycling; 5) reduced liability and

compliance costs; and 6) reduced air emissions.

Simple, day-to-day operational changes, which are often overlooked, can significantly affect the environmental and economic impact of Ames operations. Examples of practices that reduce pollution are substituting cleaning solvents with less toxic alternatives, controlling inventories of hazardous materials to prevent product expiration, and changing routine waste management

practices.

All employees are eligible to participate in the award program. Further information and nomination forms are available on the DQ web site at: <http://dq.arc.nasa.gov>. Forms may also be requested from Dr. Peter Yimbo at ext. 4-0927. Nominations must be received by May 8, for consideration. Awards will be presented later this year.

### Astrobiology seminars scheduled

In keeping with the Agency's interest in expanding general knowledge of Life in the Universe, a series of Astrobiology seminars focusing on Molecular Biology and Ecology have been scheduled by the Gravitational Research Branch. Everyone is invited to attend; no registration is necessary.

\*April 24: 11 a.m., N239, Rm. B39 "Once the Sperm Enters the Egg, it Can Be a Long Way to Go Before He Gets His Mate: Microtubules and the Meeting of the Male and Female Pronuclei." Sigrid Reinsch, EMBL, Heidelberg, Germany

\*April 27: 1:30 p.m., N239, Rm. B39 "Weathering the Storm: Acclimation and Evolution in Stressful Environments." David Berrigan, Ph.D., University of Washington, Seattle, WA

\*May 1: 11 p.m., N239, Rm. B39 "How do Cells Keep in Shape? Controlling Subcellular Architecture." Catherine Conley, Ph.D. Scripps Research Institute, La Jolla, CA

### Education outreach '98

On April 9 the Human Resources Division and the Career Center (formerly CTAP) hosted its second College Fair, Education Outreach '98, at the Moffett Training and Conference Center (MTCC).

Fourteen area universities, colleges and community colleges sent representatives to introduce their programs to the Ames community. There was a great turnout, as approximately 250 Ames employees and contractors came to MTCC to meet with the representatives. Both the colleges representatives and employees stated that they were pleased with the event.

The second Education Outreach Program was inspired in part by the new training Initiative. This fiscal year additional funding has been made available for Ames employees to take academic courses in order to broaden their knowledge base as part of their individual development plan in accordance with the NASA Strategic

Plan. Under this initiative, Ames employees are encouraged to seek academic courses which will give them a chance to experience new subject matter outside the scope of their job, but is consistent with the mission of NASA Ames. For example, technical managers may choose to take business courses or administrative assistants may choose to take biology, etc. However, Ken Rossi and Peggy Watson of the Career Center and Marilyn Jackson of Academic Training feel that it's

important to let Ames employees know what education opportunities are available to them. Ken, Peggy and Marilyn are all available to discuss academic programs. Contact Ken Rossi and Peggy Watson at ext. 4-1819 or Marilyn Jackson at ext. 4-6937 or by email for more information.

BY MARILYN JACKSON AND  
PEGGY WATSON



photo by Cesar Acosta

### Take Our Daughters to Work Day

"Take Our Daughter to Work Day" was originally created and sponsored by the Ms. Foundation for Women. This is a day dedicated to girls' ideas, spirit and dreams. It's a day when we can all help girls remain healthy, confident, strong and on the road to a bright future. This year's theme is "Imagine A Day." The purpose is to direct attention to the needs and concerns of girls, and to help them stay focused on their future during adolescence. Girls are the next generation of women leaders who will work in the world — and change the world. We can invest in all our daughters on April 23.

The following activities are being planned at Ames by the ACW and FEW to observe "Take Our Daughter to Work Day," scheduled for Thursday, April 23:

1. Opening session, 9:30 a.m., N-245 Auditorium.
2. Various Ames tours starting at 10:00 a.m. to 3:00 p.m.
3. On-line chat with ten famous women, 6:00 a.m. to 4:00 p.m., N-241, Rm. 149.

The third annual Virtual Take Our Daughters to Work Day sponsored by the Women of NASA project, will feature ten select female leaders from a wide spectrum of professions who will meet on-line with hundreds of thousands of students, parents, and schools worldwide to discuss and celebrate opportunities as well as gain insight into the professional and personal aspects of their lives. The day is devoted to giving young people anywhere in the world who have Internet access the opportunity to share the Take Our Daughters to Work Day experience and gain insight into their own future choices.

During each hour of the day from 6:00 a.m. to 4:00 p.m., Pacific Time one selected woman will be available for conversation via a live web chat. These women have been selected based on their diverse professions, background and

experiences; their education and training; their interesting career paths, and the positive impact their dialogue will have on young people. To find out more about the event and to register to chat, please go to: <http://quest.arc.nasa.gov/women>.

4. Ames Space Encounter — Drop In basis, 1:00 p.m. to 3:00 p.m., N-226

5. Portfolio workshop, N-245, Auditorium - close-out session.

Please note that these activities are

open to sons as well as daughters, ages 8-17 years old. The schedule will be distributed through centerwide email. POCs: Christine Munroe, at ext. 4-4695, Chris Hlavka, at ext. 4-3328 or the author, at ext. 4-5778.

BY ANGELA BRUMFIELD



### N210 renovation, project review

The center has recently completed the renovation and restoration of Building N-210, the Flight Systems Research Laboratory. This facility was

the life of the building.

This renovation was mandatory. Seismic reinforcement was needed to upgrade the facility to conform to acceptable earthquake design standards. Changes were required to conform to updated fire safety code requirements; exit corridors were improved; the building is fully sprinklered and fire alarm upgrades were implemented. The building's electrical system was changed out to remove PCB transformers and install new, reliable and 'clean' equipment. The building's mechanical system was replaced with a new, more reliable and cost-efficient air-conditioning and heating system. Additional computer room space was added. The building has received an architectural facelift concurrent with these utility improvements. The total

project budget was \$6.3 million.

Advocacy for this project was supported by Code AF. Primary tenants are Code AR and the FAA.

Design started in late 1994 for this fiscal year 1996 construction. Design consultants were Winzler and Kelly, San Francisco. Charles and Braun, San Francisco, were mechanical engineers for this project.

Construction work started in late 1996 and was completed last month.

The construction contract was performed by R. P. Richards, Inc. of Santa Barbara. Construction support services were provided by Daniel, Mann, Johnson, & Mendenhall. Project management was provided by Ames' Code FEF.

BY PETER GOLDSMITH



photo by Peter Goldsmith

Architectural treatment of interior wall at the N-210 high bay.

built and dedicated in 1940; it was the first permanent facility built at Moffett Field by the NACA. It was primarily used as an airplane hangar with a support laboratory and office space. A major addition was undertaken in 1959 when office space was added to the south end of the facility. Interior spaces have been added and changes made throughout



photo by Ken Wolf

Installation of return fans in area above office complex at N-210.

## Briefs

### New safety software for pilots

Two new software packages enabling pilots to use laptops to avoid hazardous terrain and find their place on maps are the latest success stories of a NASA program bringing together entrepreneurs and space engineers.

"TerrAvoid" and "Position Integrity" combine Global Positioning Satellite (GPS) data with high-resolution maps of the Earth's topography. Dubbs and Severino, Inc., based in Irvine, CA, has developed software that allows the system to be run on a battery-powered laptop in the cockpit.

The packages, designed primarily for military sponsors and now positioned to hit the consumer market in coming months, came about as the result of the Technology Affiliates Program at NASA's Jet Propulsion Laboratory's (JPL), Pasadena, CA.

### Earth drags space, time as it rotates

An international team of NASA and university researchers has found the first direct evidence of a phenomenon predicted 80 years ago using Einstein's theory of general relativity -- that the Earth is dragging space and time around itself as it rotates. Researchers believe they have detected the effect by precisely measuring shifts in the orbits of two Earth-orbiting, laser-ranging satellites.

"General relativity predicts that massive rotating objects should drag space-time around themselves as they rotate," said Dr. Erricos Pavlis of the Joint Center for Earth System Technology. "Frame dragging is similar to what happens if a bowling ball spins in a thick fluid such as molasses. As the ball spins, it pulls the molasses around itself. Anything stuck in the molasses will also move around the ball. Similarly, as the Earth rotates, it pulls space-time in its vicinity around itself. This will shift the orbits of satellites near the Earth," Pavlis said.

Pavlis also stated that the plane of the orbits of the two satellites were shifted about six feet (two meters) per year in the direction of the Earth's rotation; this is about 10 percent greater than what is predicated by general relativity theory.

### NASA history wins prestigious prize

The Organization of American Historians (OAH) has selected "To See the Unseen: A History of Planetary Radar Astronomy," written by Andrew J. Butrica and published by NASA, as the winner of the 1998 Richard W. Leopold Prize.

In this book, Butrica has provided a comprehensive history of planetary radar astronomy, a little-known but important field of space science, which has significantly expanded scientific knowledge of the solar system through the use of radar over the past 50 years. The technology involves aiming a carefully controlled radar signal at a planet (or some other target -- such as a satellite, an asteroid, or a ring system), detecting its echo, and analyzing the information the echo carries.

## Cooperative agreement signed



photo by Eric Hamburg of Aerospace Corp.

Dr. Kenneth Ford, Ames' Associate, Director for Information Technology, (left), and Dr. George Paulikas, executive vice president of Aerospace Corp., signed a cooperative agreement March 31 on behalf of Ames Research Center and Aerospace Corp. to stimulate advances in information technology research.

## NASA signs 124th information technology cooperative agreement

NASA officials signed a cooperative agreement on March 31 with the Aerospace Corp., El Segundo, CA, to stimulate advances in information technology for incorporation into NASA programs.

This is the 124th such agreement signed since Jan. 1996 by officials from Ames. NASA has signed the network of agreements with 94 companies, 23 universities and seven other federal agencies to support agency goals, to leverage information technology resources and to promote use of NASA technologies.

"We will perform joint research with the Aerospace Corporation to develop information technology in support of space missions and other NASA research," said Dr. Kenneth Ford, Ames' Associate, Director for Information Technology, who signed the agreement on behalf of NASA. "Making spacecraft more self-sufficient, or 'autonomous,' by equipping them with intelligent computers is an example of how Aerospace and NASA could work together," Ford said.

"Automated decision-support systems can assist in monitoring data from spacecraft, detecting and diagnosing problems and suggesting solutions to decrease the workload for ground-control operations," said Dr. Sergio Alvarado of the Computer Systems Division at Aerospace. "Satellites with intelligent systems onboard will be able to periodically correct their attitude and orientation, manage their orbits and perform exploratory missions in deep space on their own initiative."

"Our partnership with NASA will allow us to share information technology that we are now applying to Air Force space programs," Alvarado said.

Developing and using autonomous spacecraft, machines and systems that are smart, adaptable, curious and self-sufficient is one of five critical technology areas that NASA has identified to accomplish its strategic goals.

The other four technologies include: integrated design systems that will enable global work teams to form in

order to reduce the design cycle time for development of aircraft and spacecraft; space systems operations to reduce spacecraft launch and operations costs; large-scale information and simulation technology to use advanced computers and networks to manage the vast amount of data gathered by satellites supporting NASA's Earth Science program; and aviation operations to improve air travel safety while increasing capacity of airports to handle increases in the number of flights during the next decade.

To date, Ames has achieved a number of important successes in pursuit of agency objectives in these areas. Examples of such accomplishments include:

- On-going work on 3-D computerized reconstructive facial and breast surgery and robotic brain surgery technology being developed by NASA and Stanford University, Palo Alto, CA.
- Continuing development by government, industry and academia of the Next Generation Internet that will run as much as 1,000 faster than today's Internet. The new Internet will enable long-distance medical diagnosis and worldwide scientific collaboration that require quick transmission of huge data files.

- Use of NASA's high-speed Darwin computer network by Boeing, other aerospace companies and NASA. The partners work together through the powerful, Internet-like system to instantly analyze tests of airplane models inside wind tunnel test sections. Air blows around airplane and rocket shapes in the tunnels to simulate flight. Engineers expect Darwin to reduce the design cycle time for airplanes by about a 25 percent.

- A virtual laboratory that permits people separated by thousands of miles to participate in experimental, simulated flights of airplanes and spacecraft using the world's biggest vertical motion simulator at Ames. Engineers take part in experiments from a distance after computer systems are shipped to locations remote from Ames.

BY JOHN BLUCK



## New National Facility at Ames

### First air traffic control tower simulator takes 'flight'

Ames has begun construction of a full-scale air traffic control tower simulator that will provide -- under realistic airport conditions and configurations -- a facility that will test ways to combat potential air and runway traffic problems at commercial airports.

Researchers will look primarily at the feasibility, safety, reliability and cost benefits of technologies prior to incorporating them into airports. In addition, testing will provide information that may assist in developing proposed changes to airport ground procedures and in construction of new airport facilities.

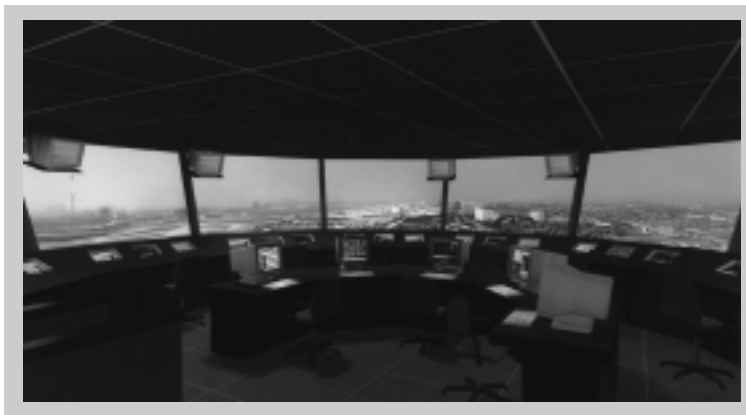
"This will be the only one of its kind in the world," said Stan Harke, project manager. "It will allow the commercial aviation industry to study and correct potential problems in a safe setting before they become actual problems. This

Computer software, provided by Raytheon Systems Co., Arlington, TX,

simulation participants and visitors, as well as all the computers, displays and communication links necessary for a fully operational airport.

"The principal value of this facility is risk mitigation. We have no business introducing new functions into delicate environments like Chicago O'Hare, Dallas/Fort Worth, Los Angeles, New York or Atlanta, without first shaking them down with the actual users in an environment which very closely replicates the real world," said Dennis Lawson, FAA lead surface management advisor on the project.

The facility is scheduled to begin testing operations in 1999. Project engineering for the facility is provided by the firm of Daniel, Mann, Johnson &



*The SDTF cab's interior is 24 feet in diameter. The 360 degree Tower Cab replicates layout of Level 5 towers with up to 9 controller positions at the perimeter consoles and 3 positions at the center station. A modular design allows reconfiguration of the center consoles to match layout of actual towers of major airports.*

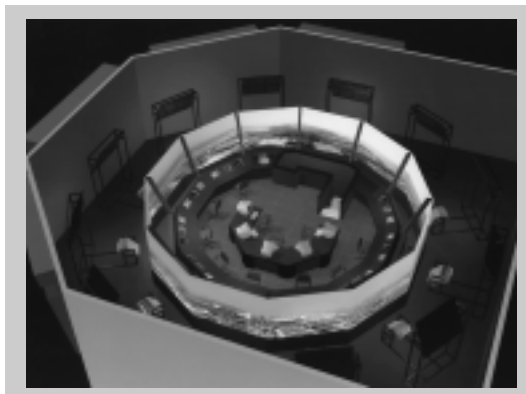
will be integrated with the tower simulation hardware technologies at Ames to support both radar and out-the-window visual simulation. The facility's second floor is designed to replicate a typical air traffic control tower. The tower cab will have reconfigurable site-specific displays, such as terminal area radar, surface radar and weather, installed based on FAA specifications. Twelve rear-projection video screens will provide a seamless 360-degree, high-resolution view of the airport or other scenes being depicted.

These image generators will provide a realistic view of weather conditions, environmental and seasonal effects and the movement of 200 or more active aircraft in the air or on the ground.

The imaging system will be powered by supercomputers and the remainder of the simulation by approximately 100 Pentium processors. Video cameras will record air traffic controllers' activities for human factors research, and will also provide visitors and researchers unobtrusive remote viewing of simulations in progress.

Ramp controllers, airport operators, simulation engineers, software developers and researchers will be located in separate work areas on the facility's first floor. Also located on the first floor will be a briefing room for

by the firm of Daniel, Mann, Johnson &

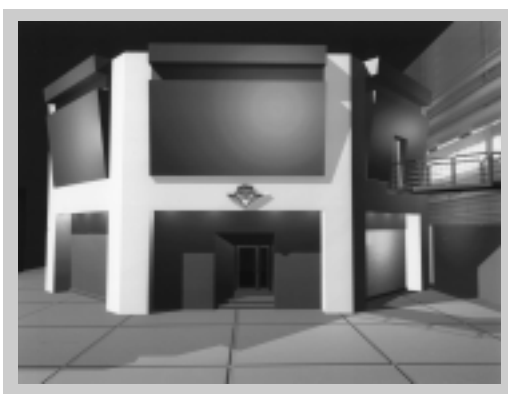


*An isometric view of the SDTF shows 12 high-brightness projectors and optical screens (150" diagonal) which create realistic out-the-window views of the (computer-generated) airport panorama.*

will be as close to real as it can get," he added.

Jointly funded by NASA's Advanced Air Transportation Technologies office and the Federal Aviation Administration (FAA), the \$9.3 million, two-story building, called the Surface Development and Test Facility, is being built in the highbay of building N-262.

"We will be able to simulate any airport in the world," said Nancy Dorighi, deputy project manager. The three-dimensional visual database of the airport will be viewed through the 360-degree window of the simulator. The visual scene, along with specific airport traffic patterns and operating procedures, will give us a very credible simulation capability."



*NASA's new Surface Development and Test Facility (SDTF), is a full-scale, highly sophisticated simulation facility that will emulate Level 5 air traffic control towers and the busiest airports.*

Mendenhall, Moffett Field, CA. Project partners also include Oracle Corp., Redwood Shores, CA, and Silicon Graphics Inc., Mountain View, CA. Representatives from the FAA's air traffic control supervisors committee and the National Air Traffic Controller's Association, as well as the Air Transport Association, participated in all phases of the facility's design.

Images of the facility are available at the following URL: [http://sdtf.arc.nasa.gov/sdtf/docs/op\\_envIRON.html](http://sdtf.arc.nasa.gov/sdtf/docs/op_envIRON.html).

BY MICHAEL MEWHINNEY

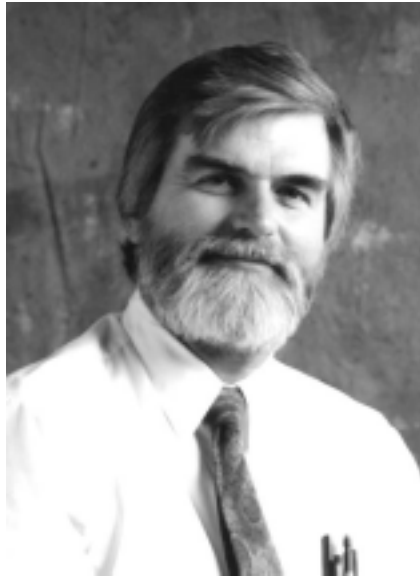
# Solar-powered aircraft development to be discussed at next Director's Colloquium

W. Ray Morgan will be the Director's Colloquium speaker on Thursday, April 23, at 2:00 p.m., in the Main Auditorium, in N-201. He is corporate vice president and director of AeroVironment's Design Development Center at Simi Valley, CA. He will speak on the subject "Solar-Powered Aircraft development."

He is responsible for all design, fabrication and test efforts performed at the facility, which is currently focusing on remotely piloted aircraft that are extremely small, or have extreme altitude or duration performance. Morgan led the design and fabrication of the Pathfinder solar-powered aircraft under a classified program in the early '80's and served as the principal test pilot. He now continues as senior technical and programmatic advisor to the solar aircraft development programs at AeroVironment (AV).

This solar-plane development program is part of the NASA Environmen-

tal Research Aircraft and Sensor Technology (ERAST) program. AeroVironment has set several altitude records with their solar planes.



W. Ray Morgan

Morgan joined AeroVironment in 1980 as program manager and chief engineer for a contract with the DuPont Company to develop and fly the first piloted, solar powered aircraft, Solar Challenger, from Paris to England. Since that time, he has served as program director/manager and/or principal engineer on a variety of other air, ground, and water vehicle design/development/test programs, totaling 35 different working prototypes developed in 17 years.

Prior to joining AV, Morgan was with Lockheed for 11 years as design specialist in propulsion at the Lockheed-California company. He is co-inventor of a technique for permitting high-altitude restarts of "cold-soaked" turbine engines, developed for the S-3A auxiliary power unit. The latter part of his career at

Lockheed was spent in the Advanced Development Projects Division (ADP, popularly known as "The Skunk Works") working on classified programs. He is co-inventor of the POINTER, backpackable, electric-powered UAV and has a variety of patents applied for in the fields of aircraft technology and flying toys.

Morgan is a member of both AIAA and the AUVS, and has been a speaker at AIAA, AUVS, SHA, MOWW, and SAWE conferences. In 1996, he was a recipient of the Aviation Week Laurel award, and was inducted into their Hall of Fame in 1997. He was presented with the NASA Public Service Award in 1997 for his support of the NASA Environmental Research Aircraft and Sensor Technology (ERAST) Program.

Morgan has written and presented a variety of technical papers in the aviation community, and holds ratings as a private pilot, hang glider pilot, and SCUBA diver.

Please note that the colloquium time is 2:00 p.m. in the main auditorium. No invitations (tickets) are required. The audience will be seated on a first-come, first-served basis. For more information, call Naz Haghbin, Office of the Chief Scientist, at ext. 4-1494.

## Sloan Fellows from Stanford visit Ames



photo by Sue Bowling

Marcie Smith, Lunar Prospector mission operations manager, demonstrates the LP data read-out screens for the visiting Sloan Fellows group.

On April 8, Estelle Condon, Chief of the Earth Science Division at Ames, brought about 30 of her Stanford Sloan Fellowship program classmates to the center for a one-half day visit. The group was greeted by Assistant Center Director for Planning Nancy Bingham, Ames' 1997 graduate of the program. She welcomed the visitors on behalf of Center Director Henry McDonald, and reminisced fondly about her experiences from last year's program and the interesting and challenging path that her career has taken since that time.

To ensure that the group had a chance to see as many Ames facilities and hear about as many center programs as possible, they were divided into subunits and ferried to different sites at the center. Under the watchful

guidance of Brenda Collins of the Ames Office of External Affairs, some of the distinguished visitors were treated to a visit to the Numerical Aerospace Simulation facility, Lunar Prospector mission control center and 12-ft. pressure tunnel. Others got a chance to see the gravitational biology research facility (space station mock-up and centrifuge), Dr. Muriel Ross' biocomputation center, and the vertical motion simulator.

Members of the group said that this was one of the truly fun experiences of their year to date, and promised to support and encourage Stanford Sloan program organizers to continue the tradition of an annual Ames visit by class members.

### AIDS bike ride attracts humanitarians

On the morning of May 31, 2,500 people will leave from Fort Mason in San Francisco on their way to Los Angeles, beginning a seven-day, 560-mile voyage by bike. This special event is the California AIDS Ride 5, a fundraising campaign that provides money for AIDS services in the San Francisco and Los Angeles regions. Ames Research Center is proud to announce that two of its employees, Joel Antipuesto, a multimedia developer for the Numerical Aerospace Simulation Systems Division, and Rose Ashford, Manager of the Terminal Area Productivity Program in the Aviation System Capacity Office, will be among the valiant riders.

This will be both Joel and Rose's first really long-distance bike ride. In fact, before last summer, Joel hadn't been on a bike since high school. Inspired by friends who have done previous AIDS Rides and the difference that they have made, he decided that he was willing to accept the physical challenge. "Last fall, I felt very uncomfortable maneuvering myself around on two wheels," Joel confesses. He can now be seen riding around the center and tackling hills in San Francisco, where he lives, on the week-ends.

"El Nino hasn't helped," Antipuesto laughs.

"I've tried to keep fit and slow down advancing middle age," says Ashford, "but riding 80 or 90 hilly miles a day for seven days is the most severe physical challenge I've ever undertaken." She rode "centuries" or 100-mile bike rides many years ago while living in flat Louisiana, but finds even half that distance now tough around the South Bay hills.

The reason that fundraising events like this exist is that AIDS remains a global epidemic. In the last sixteen years, over 360,000 people have died of AIDS in the

United States alone. This is six times the number of people who died in the Vietnam War. The number of people infected continues to grow. An estimated 40,000 people will be infected this year, of which 25% will be teenagers. Recent advances in new drug therapies have increased the quality of life for many people living with HIV/AIDS. In fact, the National Center for Disease Control and Prevention reported in July 1996 that the death rate attributed to AIDS had decreased by 19%. This is good news, but it means that there are more people living with AIDS than ever before--people who will need care, treatment and support.

Both Joel and Rose have been actively volunteering with AIDS organizations for several years. Through Joel's experience in being a practical and emotional support volunteer, he's worked with and taken care of people living with AIDS. However, the disease started becoming more personal when close friends started finding themselves HIV-positive. "I've had personal friends tell me their HIV status has changed over the past couple of years," he says. "In some cases, I've seen them stay strong and healthy, and in other cases I've seen their health decline. Participating in the AIDS Ride is

a way for me to deal with this situation positively. Raising money for services and raising awareness are two important things." Rose's commitment to AIDS has been mostly through fundraising. She has lead a team on the annual San Jose AIDS Walk for the last several years, raising in total well over \$10,000. "Two of my closest friends have children who are infected with AIDS. I understand their feelings of helplessness in the face of a disease with no cure. Raising money to find a cure and prevent more people becoming infected is the only way I know how to help" says Rose. Rose

also headed up the very successful 1994 Combined Federal Campaign at Ames which raised over \$250,000 for local, national and international charities.

There are several AIDS Rides that happen around the country, and the combined total that these rides have raised for AIDS services is nearly \$40 million. Sponsored by Tanqueray, the California AIDS Ride tries to get as many items and services donated to keep the



Rose Ashford



Joel Antipuesto

### Space Day activities set for May 21

Mark it on your calendars! Space Day in Hangar One, sponsored jointly by Ames, Lockheed Martin Missiles and Space, the American Institute of Aeronautics and Astronautics, and the Astronomical Society of the Pacific. This will be an exciting day of interactive, hands-on, educational "lunar" activities for 2,500 or so 3rd through 6th-graders from the local Sunnyvale and Mountain View schools. More details will follow in the next issue of the Astrogram, but if you have an interest in volunteering for any of a host of activities, please let us know. We can use your help for an hour to help with set-up or parking, or for a half to a full day in the hangar with the students.

Call Lori Burkart at ext. 4-0494, or email her at: [lburkart@mail.arc.nasa.gov](mailto:lburkart@mail.arc.nasa.gov) or Betsy Carter at ext. 4-2742, email: [ecarter@mail.arc.nasa.gov](mailto:ecarter@mail.arc.nasa.gov) to get your name on the volunteer list.

For more information about Space Day at Ames, check our web site at: <http://lunar.arc.nasa.gov> under "Space Day."

cost for managing the ride down. In fact, the 400 person crew who take care of the riders during the week are all volunteers. This ensures that the bulk of the money raised is passed directly to AIDS organizations.

Joel and Rose have made a commitment to helping people living with AIDS. Those wishing to support them in their efforts, are invited to make pledges. Both must raise a minimum of \$2,500 by May 12, but their personal goals are twice that much. For more information, contact Joel at ext. 4-6559, or e-mail [jantipuesto@mail.arc.nasa.gov](mailto:jantipuesto@mail.arc.nasa.gov), M/S : 258-6 or Rose at ext. 4-0914, or e-mail [rashford@mail.arc.nasa.gov](mailto:rashford@mail.arc.nasa.gov), MS 262-5). Also, you can visit Joel's personal web site at: <http://www.concentric.net/~4joel/CARindex.html>



## Ames Community Activities

### Ames 'STELLAR' program is indeed...stellar!

The STELLAR program is preparing for its 1998 summer session, and Ames would like to offer center employees an opportunity to participate. STELLAR is an innovative educational program for K-12 teachers designed to improve math, science and technology curricula through experiences gained in NASA research laboratories.

Each summer, STELLAR hosts 16 teachers in a five-week, intensive science immersion program hosted by the Life Sciences Division at Ames Research Center. Teachers spend the morning hours working in NASA laboratories as techs and research assistants. Through participation, they develop an increased awareness and enthusiasm for current scientific research, which in turn is integrated into their classrooms.

During the afternoon hours, teachers work in collaborative groups to develop hands-on classroom science activities using their experiences in the laboratories. The activities are tailored to specific grade levels with the guidance of UC Berkeley Lawrence Hall of Science curriculum specialists. These activities are later available free to anyone via the Stellar web site, <http://stellar.arc.nasa.gov/stellar>, as well as at National and local Teacher Conferences.

Since its inception in 1994, STELLAR has accomplished a great deal. Two of the classroom products have been incorporated into CD-ROM format. To date, 37 classroom activities have been published. More than 10,000 STELLAR activities diskettes and 10,000 CD-ROM's have been distributed to interested educators nationwide.

More recently, selected STELLAR alumni worked with a group of high school students to create an educational publication entitled, "Space Life Express". This publication is currently being distributed to over 400 classrooms nationwide. The STELLAR alumni have grown to over 184 educators. They are teaching NASA-related science lessons, not only here in the Bay Area, but as far away as Alaska, Colorado and New Mexico. They also inform and educate their colleagues about available STELLAR and NASA resources, making STELLAR products known to an estimated 10,000

educators and 100,000 students each year. In addition, STELLAR activities are now also available in Spanish.



STELLAR teachers are exposed to new, fascinating technology and science information—both within and outside of NASA. Through various partnerships, with Pacific Bell, Macromedia, Foothill College and San Jose State University to name a few, teachers are able to experience working with new technology and learning ways to

integrate this knowledge into the classroom. The summer is filled with many activities for teachers geared toward the enhancement of science education. With NASA scientists at the forefront of aeronautics, Earth observation, space exploration and innovation, and science teachers at the front of the classroom, STELLAR serves as a bridge for contemporary science instructors by providing a connection between NASA scientists and educators, giving them the power and the skills to catalyze and cultivate a genuine interest in science.

STELLAR teachers have worked with the Life Sciences Division at Ames for the past 4 years. However, the teachers have expressed a high level of interest in working with other organizations. The cost to have a STELLAR teacher work in an Ames organization is \$3,000 per teacher. This amount is transferred to the teacher over the 12-month period as he or she accomplishes a series of milestones.

One teacher would work for five weeks (half time) during the summer for a principal investigator in an Ames organization. In addition, they will organize and perform one school or district workshop during the school year, and develop a classroom activity based on the subject matter to which they are exposed during the five weeks. This activity would be tested in STELLAR classrooms (approximately 45-50 classrooms), revised with the PI's input, published, and finally disseminated to classrooms nationwide. This is a wonderful way to educate the public about Ames' work and to stimulate the students of today, who will become the leaders and the scientific workforce of

the 21st century.

The program has been commended by local Congresswomen Anna Eshoo and Zoe Lofgren for its influence on the educational system, on educators and on students. The program is promoted and products made available via the world wide web, public television, cable television, radio, and print media. For a relatively small investment, STELLAR reaches a very large audience.

Sonya Cardenas, STELLAR program director, encourages everyone's participation in the upcoming summer program. For further information or to learn how to incorporate a STELLAR teacher into an Ames organization, contact Cardenas at ext. 4-1866.

### *Child Care Center golf tournament scheduled May 8*

Ames employees are invited to participate in the third annual Ames Child Care Center charity golf tournament, May 8, at the Moffett Field golf course. The tournament will begin with registration, lunch, and chipping and putting contests at 11:30 a.m., and a shotgun start at 12:30 p.m. The entry fee is \$50 for a round of golf and lunch. After the tournament, participants will continue with chipping and putting. There will also be a drawing with prizes, team awards, and a reception with hors d' oeuvres and a no-host bar.

Entry forms are available from the following tournament committee members: Shawn Bengtson, at ext. 4-4824; Tina Bengtson, at ext. 4-6880; Mike Hacker, at ext. 4-6831; Barry Sullivan, at ext. 4-6756, and Ron Bradley, at ext. 4-0123. Entry forms should be sent to Gabrielle Babin at MS: T20-D. Entry forms are also available at the following website at: <http://pathfinder.arc.nasa.gov/ACCC/html/ACCCGInfo.html>.



# Events & Classifieds

## Calendar

**Jetstream Toastmasters**, Mondays, 12 noon to 1 p.m., N-269/Rm. 179. Guests welcome. POC: Jenny Kahn at ext. 4-6987 or Pam Walatka at ext. 4-4461.

**Ames Child Care Center Board of Directors Meeting**, Tuesdays, 12 noon to 1 p.m., N-213/Rm. 220. POC: Lisa Reid at ext. 4-2260.

**Java Users Group Meeting**, Apr. 21, 1 p.m., to 2:30 p.m., N-258/NAS auditorium, POC: Sharon Marcacci, at ext. 4-1059.

**International Special Librarian's Day**, April 23, 11:00 am. to 1 p.m., Display and handouts, Ames cafeteria.

**Native American Advisory Committee Meeting**, Apr. 28, 12 noon to 1 p.m., Ames Café. POC: Mike Liu at ext. 4-1132.

**Ames Child Care Center's Annual Garage Sale**, May 2, in Sunnyvale. POC: Tonya Gregory at (408) 735-0610 or Gabrielle Babin at ext. 4-4184.

**Ames Contractor Council Meeting**, May 6, 11 a.m., N-200/Comm. Rm. POC: Greg Marshall at ext. 4-4673.

**Hispanic Advisory Committee for Employees**, May 7, 11:45 a.m. to 12:30 p.m., N-239/Rm. 177. POC: Carlos Torrez at ext. 4-5797.

**Environmental, Health & Safety Monthly Information Forum**, May 7, 8:30 a.m. to 9:30 a.m., Bldg. 19/Rm. 1078. POC: Linda Vrabel at ext. 4-0924.

**Ames African American Advisory Group Meeting**, May 7, 11:30 a.m. to 12:30 p.m., N-241/Rm. 237. POC: Antoinette Price, at ext. 4-4270 and Mary Buford Howard at ext. 4-5095.

**Ames Child Care Center 3rd Annual Golf Tournament**, May 8, 11:30 a.m., Moffett Field golf course. POC: Gabrielle Babin, at ext. 4-4184.

**Professional Administrative Council (PAC) Meeting**, May 14, 10:30 a.m. to 11:30 a.m., N-244/Rm. 103. POC: Janette Rocha, ext. 4-3371.

**Ames Sailing Club Meeting**, May 14, 11:30 a.m. to 1 p.m., N-262/Rm. 100. POC: Greg Sherwood at ext. 4-0429.

**Ames Multicultural Leadership Council Meeting**, May 20, 11:30 a.m. to 1 p.m., Galileo Rm./Ames Café. POC: David Morse at ext. 4-4724 or Sheila Johnson at ext. 4-5054.

**NFFE local 997 Union General Meeting**, May 20, 11:30 a.m. to 12:30 p.m., Bldg. 19/Rm. 1040. POC: Marianne Mosher at ext. 4-4055.

**Ames Amateur Radio Club**, May 21, 12 noon, N-260/conf. rm. POC: Walt Miller, AJ6T at ext. 4-4558.

**Ames Asian American Pacific Islander Advisory Group Meeting**, May 21, 11:30 a.m. to 1 p.m., N-213/Rm. 261. POC: Daryl Wong at ext. 4-6889 or Brett Vu at ext. 4-0911.

## Ames Classifieds

Ads for the next issue should be sent to [astrogram@mail.arc.nasa.gov](mailto:astrogram@mail.arc.nasa.gov) by the Monday following publication of the present issue.

Ads must involve personal needs or items; no commercial/third-party ads. Ads will run on space-available basis only. First-time ads are given priority. Ads must include home phone numbers. Ames extensions will be accepted for carpool and lost and found ads only. Ads must be resubmitted for each issue.

### Housing

Two rooms for rent for price of one, culdesac home w/priv. rooms + bath. Campbell school district, lg. bkyard, new carpet/paint, W/D, garage. NS, M or F, no drugs, clean, prof., \$850/mo. + dep. + half utils. Tom (408) 369-9718 eves.

Share 2 bedroom duplex in Mountain View, \$580/mo., + utils. Avail. June 1. (650) 967-9135.

Studio Apt, 5 min to Ames \$670 incl. utils. (650) 965-0775.

Mt. View near Castro. Share kitchen, bathroom, laundry, garden + treehouse. Easy transport - bike/bus/train - Central Expressway - El Camino / HWY 101-237-85. All inclusive rent \$560. Available now. Lv msg. for Olivia (650) 969-3932.

### Transportation

'74 Road Ranger, 20ft, many extras, microwave, new custom mini blinds, awning, must see, \$5,000 or B/O. (408) 356-2368

'84 VW Westfalia Pop-TopCamper, 4 Cylinder, Water Cooled, Fuel Injected, 4 speed, AM/FM Cassette, Thule Roof Rack w/kayak attachment, factory shop manual, stove, refrigerator, sink, runs on 12 vdc, 120 vac and LP gas. Sleeps up to four. Super clean, exc. cond. New regist., \$6500. Home: (408) 446-3251 or cell (408) 813-5579.

'86 Chrysler Laser XE, turbo, automatic, 107K miles, power everything, trip computer, talking system monitor, new tires & brakes, exc. cond., one owner, \$2000. Lilly (408) 734-1422.

'88 Chevy Nova, 5DR HBK, AT, A/C, PS, PB, AM/FM cass. stereo, 137K mi., well maintained, very gd. cond. \$3500 or B/O. Dale (510) 438-0528.

'88 Cadillac El Dorado Biarritz, Gold series, 120k, lots new. Asking \$5300 or B/O. Robert (408) 736-4039.

'90 Toyota Tercel EZ Hatchback. 104K miles. Runs well. Good, reliable commuter car. \$2300. Jeff (650) 968-4999.

'91 Mazda 626-DX, 23k, orig. owner, 4-dr. Sedan, exc. cond., cruise control, AC/AT. Looks like new. \$8,500. (415) 857-0492.

'95 Toyota 4Runner, SR5 V6, AT, 4WD, only 26k mi., AC, power everything, mnrf, rf. rack & other opts. Exc. cond. \$23,500 or B/O. (408) 363-8727.

### Miscellaneous

Two 4-ft Red Tail Boas, 1 male, 1 female. Serious inquiries only, B/O. (408) 246-8483.

Moving sale: Blue striped demin sofa, loveseat and matching chair, aquarium, stereo cabinet, drawing table, rattan chair and coffee table, lamps, and household items: cookware, dishes, glasses, toaster, etc. Tina (650) 961-1616.

Sunglasses: Serengeti Drivers. Brown-tinted lenses, perfect for driving or flying. Crush-proof case included. Orig. over \$100, yours for \$40 or B/O. (408) 248-3680.

Moving, washer and dryer for sale. \$600. Sears large capacity washer, 6 mos. old. (408)456-0333 eves.

DP Megaflex Home Gym. \$75. (408) 260-1180.

Late model GE built-in electric double oven, self cleaning, LED controls, clock & timer. Remodeling-want to sell, \$175 or B/O. (408) 448-6118.

## Ames retirements

Name	Date	Code
Jerry Barrack	4/3/98	APM
Richard Greif	4/3/98	AFA
Dale Martin	4/3/98	AI

Macaw cage for sale: wrought iron 6'x4'x3'. Extra manzanita perches and stand. \$250 or B/O. Email [ejacobs@mail.arc.nasa.gov](mailto:ejacobs@mail.arc.nasa.gov).

Computer, slightly used (one week). HP Pavilion 8240 w/HP Pavilion M50 MultiMedia monitor, 233 Pentium, 32MB SDRAM upgradeable, 24xCDRom, 56K internal modem, 4G HD, WIN95, keyboard, mouse, software, etc. \$1,300. Call (408) 249-5180, early mornings or evenings after 8 p.m.

For sale: Hobart professional mixer with attachments, \$300; Japanese screens, 6ft. tall black and white \$35; 4- drawer lateral file cabinet, like new \$450; 4-drawer vertical file cabinet \$75. Gary (650) 254-0614.

2" receive hitch, fitted on '96 Chevy pickup, 10,000 lbs wght. rating, pd. \$270, sell for \$200. Rear solid window w/dark tint and defroster \$100. Perry (408) 946-2210.

Executive style desk, \$30. Power Rider, \$75. (408) 257-7122.

Rooster and hen, (408) 773-1927.

Set of four gold-colored alloy rims and all-terrain tires (12k mi). Off of late-80's Jeep Cherokee Ltd. \$1800 new, yours for \$500. (510) 485-4940.

Macintosh Performa computer, monitor, keyboard and mouse. \$450 or O/B. Franz (408) 264-2846.

486-66Mhz VLB motherboard & CPU, 256K cache w/ "green" BIOS & manual. \$65. (408) 295-2160.

Set of five chrome Cragar SS look-alike mag wheels. 14" rims, slotted holes, rusty, four w/tires. Free. (925) 485-4940.

Antique clocks: Art Deco granddaughter clock, \$500; dual face Ithaca, mantle clock, circa 1865, \$1,150. (408) 395-8326.

### Vacation rental

Lake Tahoe-Squaw Valley Townhse, 3bd/2ba. View of slopes, close to lifts. Wkend \$400, midwk \$150 nite. Includes linens, firewd, cleaning service. (650) 968-4155, or email: DBMcKellar@aol.com.

For sale: Maui time-share, ocean view, One bedroom sleeps four, available for two weeks: April and December. Asking \$6K for each or 10K for both. Call (408) 531-1383.

## Astrogram deadlines

All Ames employees are invited to submit articles relating to Ames projects and activities for publication in the *Astrogram*. When you submit stories or ads for publication, make sure to check the publication deadline and submit your material by e-mail to [astrogram@mail.arc.nasa.gov](mailto:astrogram@mail.arc.nasa.gov) on or before the deadline. Stories should be sent as enclosures in MS Word.

If you have questions about items for publication, contact the editor at the above email address.

DEADLINE	PUBLICATION
MON., APR. 20	FRI., MAY 1
MON., MAY 4	FRI., MAY 15
MON., MAY 18	FRI., MAY 29
MON., JUN 1	FRI., JUN 12
MON., JUN 15	FRI., JUN 26

## Miscellaneous News

### Garage sale planned

*The Annual Ames Child Care Center (ACCC) Garage Sale will be held Saturday, May 2. Please bring all donations to the ACCC (Building T20D) by April 30. All donations are 100% tax deductible. The garage sale will be in Sunnyvale. If you would like to donate or help in any way, please contact Tonya Gregory at (408) 735-0610 or Gabrielle at ext. 4-4184.*

### International Special Librarians' Day set

The Research Information Resources Branch librarians will celebrate International Special Librarians Day on Thursday, April 23 at 11 a.m. to 1 p.m., at the Ames Café. Stop by their display to receive handouts and discuss new library products and services. This event kicks off a series of "Info Expos" to be held at various locations around the center.

### Boutique scheduled

*The Ames Child Care Center will be sponsoring a Mother's Day Boutique on April 22 in the Galileo Room of the Ames Café from 11:00 a.m. to 2:00 p.m. The boutique will include all kinds of things for Mom; a wide selection of jewelry, jogsuits for the kids (not really for Mom), and an equally wide selection of gift certificates to your favorite department stores, grocery stores (also not really for Mom), and specialty shops.*

*Employees are invited to take advantage of one-stop shopping without the hassle of shopping mall crowds here at work...and support the Ames Child Care Center at the same time!*

### Aeronautics Directorate reorganized

Effective March 29, the Aeronautics Directorate reorganized and established a new division, the Aeronautical Information Technologies Division (AI).

The major focus of the new AI Division is to apply Information Technology (IT) tools to aeronautical and aerospace problems of critical importance to the country. The goal of the reorganization is to matrix the application of IT into developing advanced computational tools and processes and intelligent testing systems, techniques and processes.

All personnel in the current AA/AD Divisions were reassigned to the new AI Division pending final assignments to the new AI Branches. Branch Chiefs will be selected under competitive procedures.

### FY '99 Center Director's First Discretionary Fund Call

The Director's Discretionary Fund (DDF) has been established to fund innovative, high-risk projects in basic research. Any civil-service Ames Research Center staff member can propose to the DDF for support for a period not to exceed two years.

Proposals should be submitted through organizational channels to Dr. Banavar Sridhar, MS: 262-3 by April 24. The proposals will be evaluated by the Ames Basic Research Council and then the top-rated proposals will be presented by the Principal Investigators to the Director's Technical Innovation Forum for evaluation and possible selection.

### NASA Ames Exchange presents Ames Research Center/Moffett Field Day

Sunday, April 26 at 1:05 p.m.  
SF Giants vs. Milwaukee  
Brewers at 3 Com Park  
Cost: \$5.00

Upper reserved ticket includes pre-game tailgating party. Be one of the first 30,000 fans for J.C. Penney Giants National League West Championship Cap Day! Watch the San Francisco Giants defend their N.L. West Crown against the Milwaukee Brewers!

All are welcome - employees, contractors, friends, relatives, etc.

Tickets are available at the Ames Cafe, N-235, 6:00 a.m. to 2:00 p.m., or Ames Giftshop, N-223, 9:00 a.m. to 3:30 p.m. Deadline to purchase tickets is April 20.

For more information, please call Janine Ciffone at ext. 4-4948 or Deborah Renick at ext. 5-0290.

### THE AMES Astrogram

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Managing Editor.....David Morse  
Editor.....Astrid Terlep

### THE AMES Astrogram

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